

REMARKS/ARGUMENTS

Reconsideration and allowance in view of the foregoing amendment and the following remarks are respectfully requested.

Claims 1-8 and 10-30 are now pending. Original claims 9-12 were withdrawn as directed to a non-elected species. Claim 9 has been canceled above to avoid extra claims fees. Claim 8 remains generic with respect to the subject matter of claims 10-12 and rejoinder of those claims upon allowance of claim 8 is solicited. Applicant reserves the right to file divisional applications to the subject matter not patented herein.

Applicant notes with appreciation the Examiner's indication that claims 13-15 contain allowable subject matter. Claim 13 has been rewritten in independent form above and should therefore be allowed along with claims 14-15 dependent thereon.

Original claims 1-4, 8 and 16-17 were rejected under 35 USC 103(a) as being unpatentable over Farrar in view of Gilmour. Applicant respectfully traverses this rejection.

According to invention as recited in amended claims 1, 8, 16 and 17, a grounding terminal is provided on the lateral side of the fuel pump and this grounding terminal is in the sub tank. Furthermore, the fuel pump is substantially horizontally disposed in the sub tank. With this configuration, the ground terminal can be arranged at a low position in the sub tank, so that the grounding terminal will be immersed in the fuel even when the liquid level of fuel in the sub tank is low. Therefore, the grounding terminal is restricted from being exposed to air. In addition, the fuel feed apparatus may further include a fuel filter surrounding the fuel pump (claims 18, 20, 27, 29). The fuel filter may thus also be substantially horizontally disposed. Further, at least one of the jet nozzle and the fuel filter may be grounded via the grounding terminal. Generally, the jet pump may be at least partially arranged at a low position in the sub tank. With this configuration, the ground terminal can be arranged in the vicinity of the

jet nozzle and the fuel filter at a low position in the sub tank, so that at least one of the jet nozzle and the fuel filter can be readily grounded.

The fuel feed apparatus may further include a suction filter that opposes to the fuel filter in a substantially vertical direction (claims 19, 21, 28, 30). With this configuration, the grounding terminal is preferably away from the space between the central axis of the fuel filter and the suction filter in the vertical direction, while being in the bottom area of the sub tank. With this configuration, wiring the grounding terminal can be facilitated as compared with a structure in which the grounding terminal is arranged between the central axis of the fuel filter and the suction filter in the vertical direction.

Farrar and Gilmour do not teach or suggest the above described structure of the grounding terminal as recited in applicant's independent claims. In this regard, in Farrar, electrical charge in the grounding member 46 is carried to the grounding terminal of fuel pump 24 via a path including second leg 56, shell 30 of fuel filter 28, grounding member 32, and shell 26 of fuel pump 24. Thus, the path of the electrical charge is long and there are a number of connection points. In addition, the fuel pump 24 is positioned high in fuel reservoir 22 and, consequently, the position of the grounding terminal of the fuel pump 24 may be high. As a result, the grounding terminal of the fuel pump 24 is apt to be exposed to atmosphere.

In the structure of Gilmour, the pump and motor 18 are vertically disposed, and are electrically connected with electrical leads 17a, 17b via connecting points, which are on the top of the pump and motor 18. Accordingly, the positions of the connecting points are high in fuel tank 9. With this structure, when the pump and motor 18 are connected with electrical leads 17a, 17b via terminals, the terminals are apt to be exposed to atmosphere.

As is apparent from the foregoing, neither Farrar nor Gilmour whether taken alone or in combination teach or suggest the assembly now more specifically recited in

applicant's independent claims. It is therefore respectfully submitted that claims 1-4, 8, 16-17 and newly added claims 18-30 are not anticipated by nor obvious from Farrar taken alone or in combination with Gilmour.

Claims 5 and 6 were rejected under 35 USC 103(a) as unpatentable over Farrar and Gilmour and further in view of Nagata. Applicant respectfully traverses this rejection. These claims are submitted to be patentable over Farrar and Gilmour for the reasons advanced above. Nagata does not overcome the deficiencies of the primary references noted above. In this regard, Nagata discloses a structure in which the fuel pump is vertically disposed, and thus teaches away from the invention recited in applicant's independent claims 1, 8, 16 and 17. It is therefore respectfully submitted that claims 5 and 6 are allowable as well.


Claim 7 was rejected under 35 USC 103(a) as being unpatentable over Farrar and Gilmour as applied to claim 1 and further in view of JP '840. Applicant respectfully traverses this rejection. Claim 7 is submitted to be patentable over Farrar and Gilmour for the reasons advanced above. The Examiner's further reliance on JP '840 does not overcome the deficiencies of the primary combination with respect to the invention claimed. Further in this regard, JP '840 discloses a structure wherein the fuel pump is not accommodated in a sub tank. With such a structure, it is difficult to maintain a terminal of the fuel pump immersed in fuel in the fuel tank, e.g., when the fuel level drops. Accordingly, the JP '840 fails to teach or suggest the invention claimed by applicant and, therefore, even if combined with Farrar and Gilmour, would not anticipate nor render obvious the invention claimed by applicant.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance and an early Notice to that effect is earnestly solicited.

OKADA et al
Appl. No. 10/678,098
December 15, 2005

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: 
Michelle N. Lester
Reg. No. 32,331

MNL:sjl
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100